



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,467	09/25/2001	Thomas Elsner	Mo-6591/LeA33,454	9554

157 7590 03/18/2003

BAYER POLYMERS LLC
100 BAYER ROAD
PITTSBURGH, PA 15205

EXAMINER

SORKIN, DAVID L

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 03/18/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/937,467

Applicant(s)

ELSNER ET AL.

Examiner

David L. Sorkin

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34-46 is/are allowed.
- 6) ☒ Claim(s) 23-33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1. 6) ☐ Other: ____

Art Unit: 1723

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “two shafts... meshing with one another”, the “double lead”, the “triple lead”, the “cooling device”, the “kneading elements”, the “feed elements”, the “exhausting device”, the “triple-lead profile between two of said degassing zones” and the “admixing charging device” must be shown or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 23-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stade (US 4,534,652) in view of Higuchi et al. (US 4,474,473). Note: regarding the apparatus claims, language which relates to intended use, such as “intake” (vs. outlet) or “down-stream” (vs. upstream) has been given patentably weight to the extent that it implies structure; however, “recitation with respect to the manner in which a claimed

Art Unit: 1723

apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Also, "the manner or method in which such machine is to be utilized is not germane to the issue of patentability of the machine itself". *In re Casey* 152 USPQ 235 (CCPA 1967). Regarding claims 23 and 24, Stade ('652) discloses an apparatus comprising a double shaft extruder comprising two shafts (3,4 and 3',4') rotating in the same direction and meshing with one another; an intake opening (15 or 17 or 18); upstream and downstream portions relative to said intake opening, wherein the shaft of the extruder are designed with a double lead in a degassing zone (2 or a portion thereof) of the extruder, and with a triple lead in a pressure build-up zone (1 or a portion thereof) of the extruder, each of said degassing zone and said pressure build-up zone being downstream from said intake opening, and said pressure build-up zone being further downstream than said degassing zone. Stade ('652) fails to disclose a numerical value for the L/D ratio of the extruder. Higuchi et al. (US 4,474,473) teaches "40" as an appropriate value for an extruder (see col. 8, lines 67). It is considered that it would have been obvious to one of ordinary skill in the art to have made the L/D ratio of the extruder of Stade ('652) "40", as taught by Higuchi ('473) because the extruders of both references are twin screw, co-rotating, self cleaning extruders and Higuchi ('473) explains a rationale for selecting L/D ratio (see col. 7, lines 2-7). Regarding claims 25 and 26 Higuchi ('473) further teaches that each section of an extruder may be cooled to suit the particular material being processed (see col. 6, lines 58-62). Regarding claim 27, kneading elements are disposed immediately downstream from said intake opening,

Art Unit: 1723

said kneading elements being located between feed elements of said shafts (see Fig.

1). Regarding claim 28, the extruder comprises a plurality of degassing zones located downstream from said intake opening each of said degassing zones having an exhausting device (18, 16) connected thereto. Regarding claim 29, the shafts have a triple-lead profile in a region downstream of said degassing zones (see Fig. 1).

Regarding claim 30, an agent inlet (17) is located in a region between two of said degassing zones. Regarding claim 31, an agent entraining inlet (17) is disclosed.

Anything can be arbitrarily divided in to any number of "zones". It is considered that no further structural limitation is required by the reference to three zones in claim 31.

Regarding claim 32, a backward degassing vent opening (15 or 18) is located upstream from said intake opening. Regarding claim 33, said plurality of degassing zones comprises a last degassing zone located furthest downstream from said intake opening, said extruder located furthest downstream from said intake opening, said extruder further comprising an additive admixing charging device (17) located in said last degassing zone.

Allowable Subject Matter

4. Claims 34-46 are allowed. While the apparatus "provided" in claim 34 is considered to be obvious under section 103, the method of operation claimed in claims 34-46 is considered allowable, because feeding plastic material to the inlet opening, in combination with the upstream and downstream requirements of claim 34, is not disclosed by the closest prior art, which is Stade (US 4,534,652).

Art Unit: 1723

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 703-308-1121. The examiner can normally be reached on 8:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



David Sorkin

March 11, 2003



CHARLES E. COOLEY
PRIMARY EXAMINER